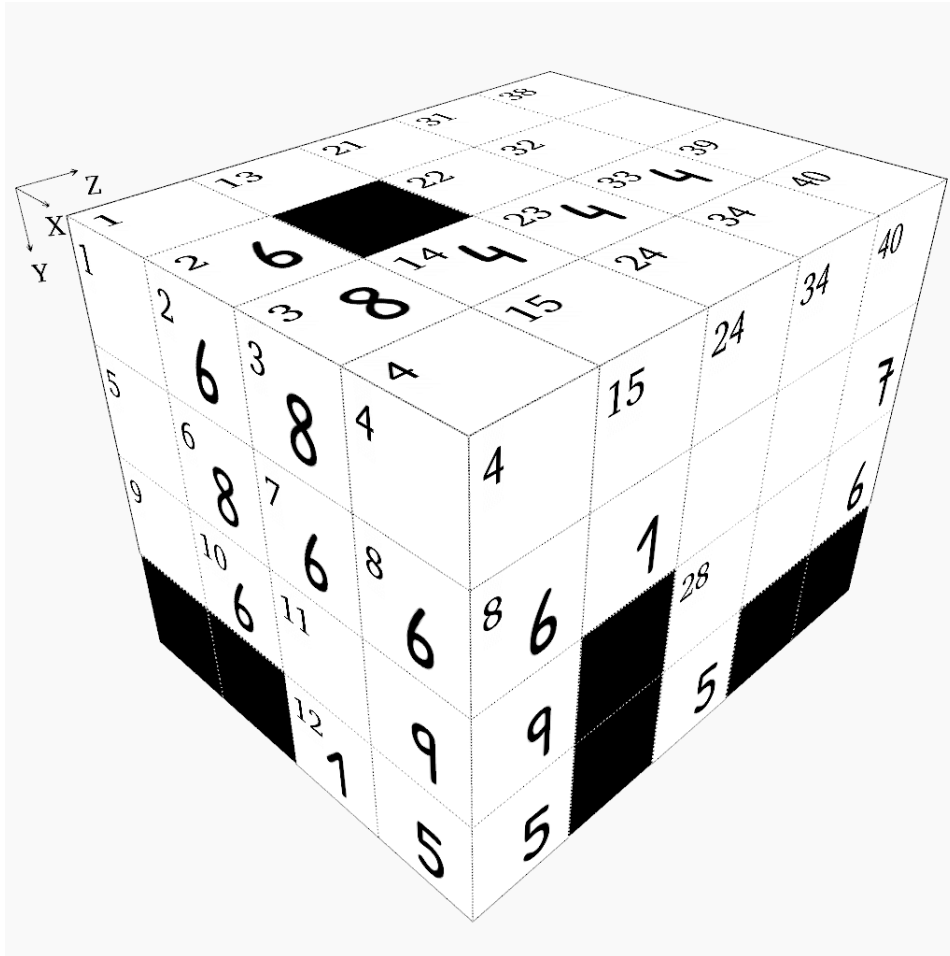


Difficulty: ★★★★★

Box - Beginner Puzzle #32



This puzzle is like a crossword, but with numbers. Each digit occupies a 3D block and can be a part of a "word" in the X,Y, and Z directions.

Rules:

1. "Words" may not start with a zero.
2. "Words" in the X direction read from left to right.
3. "Words" in the Y direction read from top to bottom.
4. "Words" in the Z direction read from front to back.
5. There is one unique solution which satisfies all the clues given below.
6. Some "words" may not have clues. They will be determined by the "words" which intersect them.

If we take the box pictured above and divide it into individual X-Y layers, we will get these planes:

1	2	3	4	13		14	15	21	22	23	24
	6	8				4				4	
5	8	6	6	16	17		1			25	
				5	2					9	
9	10	11		18		2		26	27		28
	6		9					7			
		12		19	20				29	30	
		1	5							8	5

31	32	33	34	38		39	40
		4					
35						41	7
8							
36	5	0		42	6		6
37							

X Direction

- 1 A prime number
- 5 Twice a prime number
- 9 A square
- 12 Z11 minus Y27
- 14 Two-thirds of X26
- 16 Last two digits are the same as X25
- 18 Y17 reversed
- 19 A square
- 21 Y14 plus X9
- 25 Z22 minus Y27
- 26 Y27 reversed
- 29 Five times a prime number
- 31 Three times a prime number
- 35 Forty-three times a prime number
- 36 Twenty times a prime number
- 37 Five times a prime number
- 38 Consecutive digits unordered
- 41 Mean of Z11 and X26
- 42 X18 minus X41

Y Direction

- 1 Fourteen times a prime number
- 2 Fourteen times Y23
- 3 A prime number
- 4 Thirty-five times a prime number
- 13 X35 minus X37
- 14 Mean of Y21 and Y27
- 15 A square
- 17 Z20 plus Z11
- 21 Thirty-three times a prime number
- 23 A square
- 24 Z4 divided by Z30
- 27 A cube
- 31 One thousand two hundred fifteen more than Y3
- 32 Thirty-nine times a prime number
- 33 Three-fifths of X38
- 34 Two hundred eight less than Y1
- 38 One thousand eight hundred seventy-six less than Y3
- 39 Y27 plus X14
- 40 A square

Z Direction

- 1 Z4 minus Z20
- 3 Ninety-nine times a prime number
- 4 First two digits are the same as first two digits of Y31
- 5 Nineteen times a prime number
- 6 Mean of Z11 and X18
- 7 Fourteen thousand five hundred thirty-two less than Z3
- 8 Nine times a prime number
- 9 Twice the result of Z5 plus X16
- 10 Y21 times X42
- 11 X25 minus Y23
- 20 X18 plus X41
- 22 Mean of Y17 and X12
- 28 X31 minus Y3
- 30 Mean of X18 and X14
- 37 Z10 divided by Y21

Solution:

9	6	8	9	7		4	8	9	1	4	1
3	8	6	6	5	2	9	1	5		9	1
8	6	4	9	1	2	2		7	2		5
		1	5	8	1				7	8	5
				9	1	4	7	6	8	7	5
				8	2	1	3	7		5	7
				5	0	2	0	6	5		6
				6	9	5		5			